LRN Results Messenger BioWatch Deployment

Tim Morris
CDC/IRMO
5/14/2003

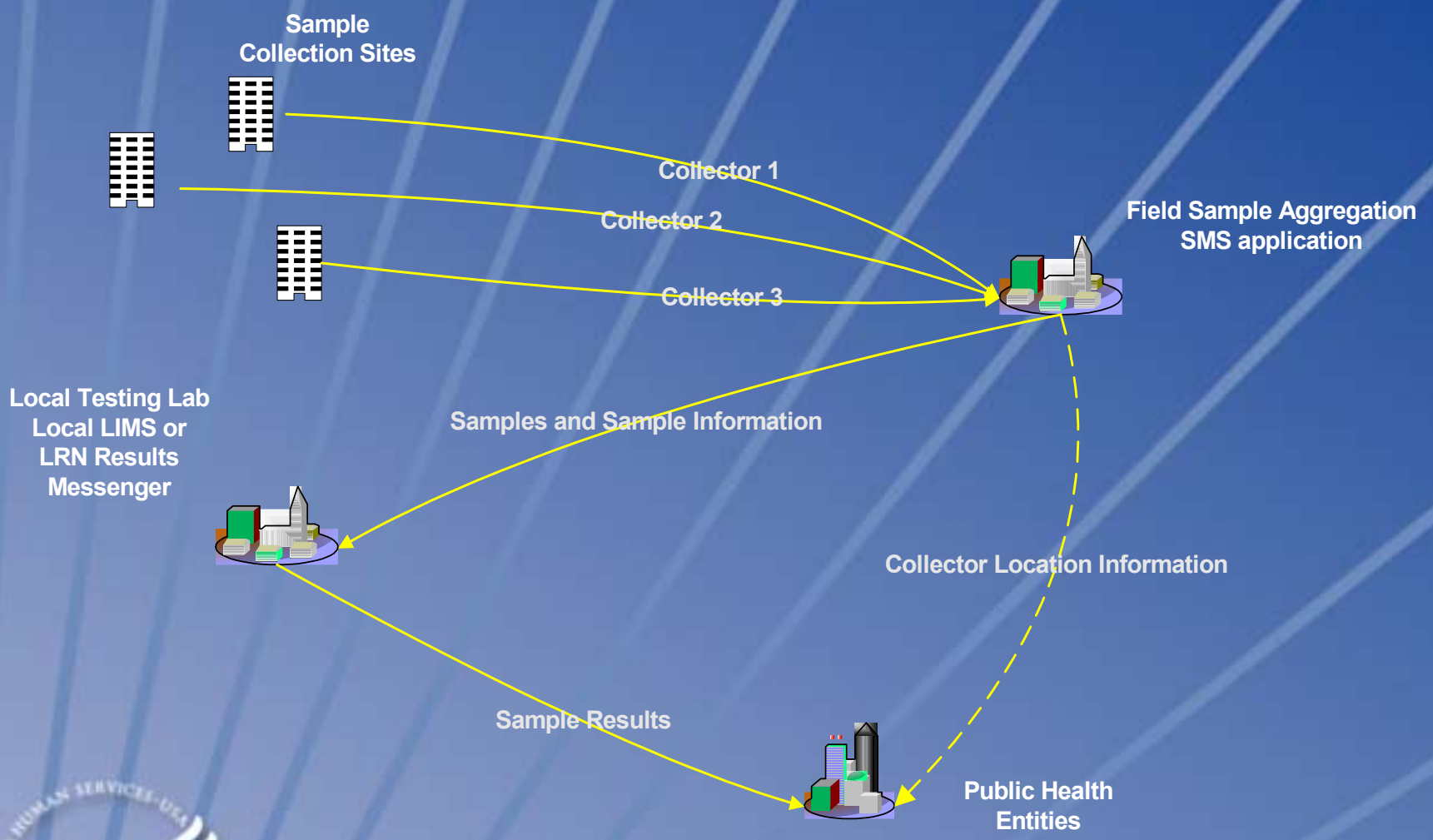
BioWatch Information Management

- Field data management
- Local laboratory data storage and management
- Public Health Information Network(PHIN) standard data exchange
- Public Health data analysis capacity

Laboratory Testing Transition

- Stage 1 – Field team will Federal Express filters holders to LLNL central processing lab
- Stage 2 – New BioWatch LRN lab aseptically removes filter and sends to LLNL processing lab
- Stage 3 – Fully functional BioWatch LRN lab performs complete processing and testing of filter samples and returns filter holder

BioWatch Sample/Result Information Flow



Phase I
BioWatch Secure Data Exchange

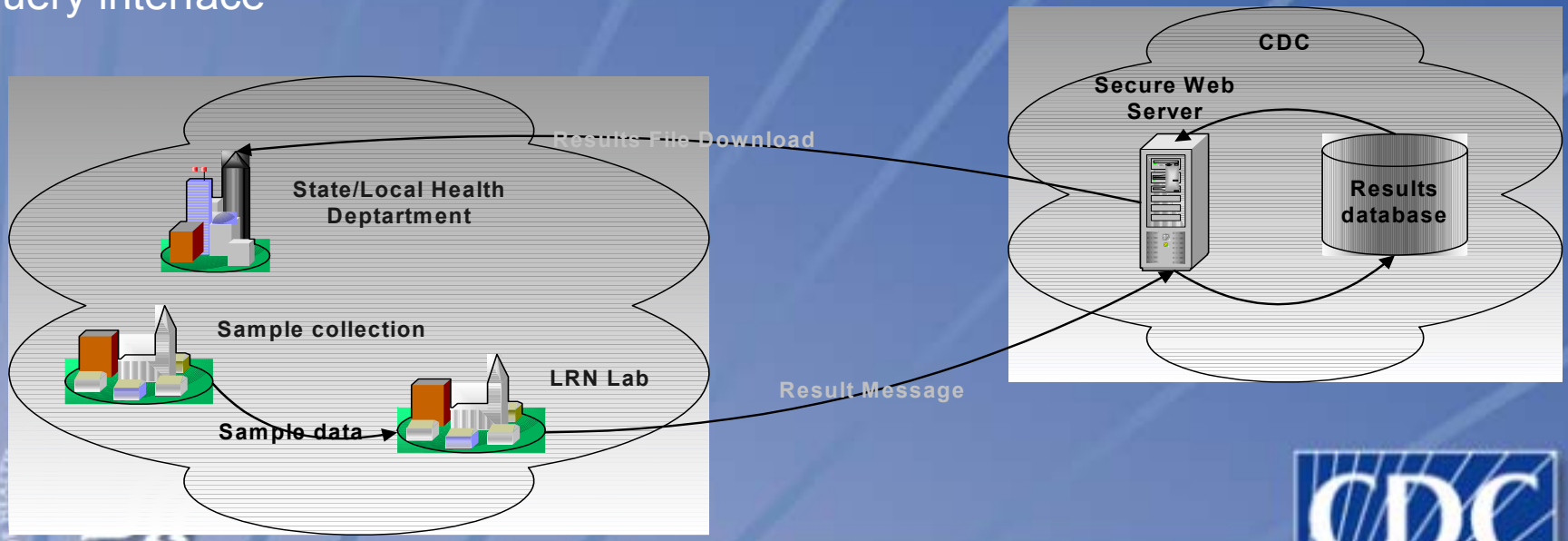
Laboratory enters specimen information or imports from SMS into LRN Results Messenger

Result data entered into LRN Results Messenger

Laboratory chooses records and receivers and drops in message queue

Laboratory initiates message send to CDC repository

Receiving entity retrieves data from CDC repository via secure web page with query interface



Phase II
Routable Secure Data Exchange

Laboratory enters data into LRN LIMS or CDC provided LRN Results messenger application

Message created and dropped in local transport queue

Depending on sender and receiver capacity results routed directly to receiver

Laboratories with existing LIMS can create message and place in message system queue for transport

Information Automation and Linkage

- Import of field sampling data into laboratory databases
- Early binding of information from the field for increased downstream data quality
- Linkage of collector and filter data with assays and results
- Linkage of collector location data with results for Public Health response
- Aggregation of information for analysis by authorized personnel

LRN Results Messenger

- Local application supporting storage of:
  - Subjects (Human/non-human and environmental)
  - Samples/specimens
  - Assays
  - Results
- Local data storage
- Clinical and environmental sample support
- Standard terminology support with update capacity
- Standard message creation
- Standard message transport
- User determines when and to whom specific records will be sent

Sampling Information

- Sensor ID
- Location (text)
- Sample ID
- Sample start and end times
- Sample collection duration
- Comments

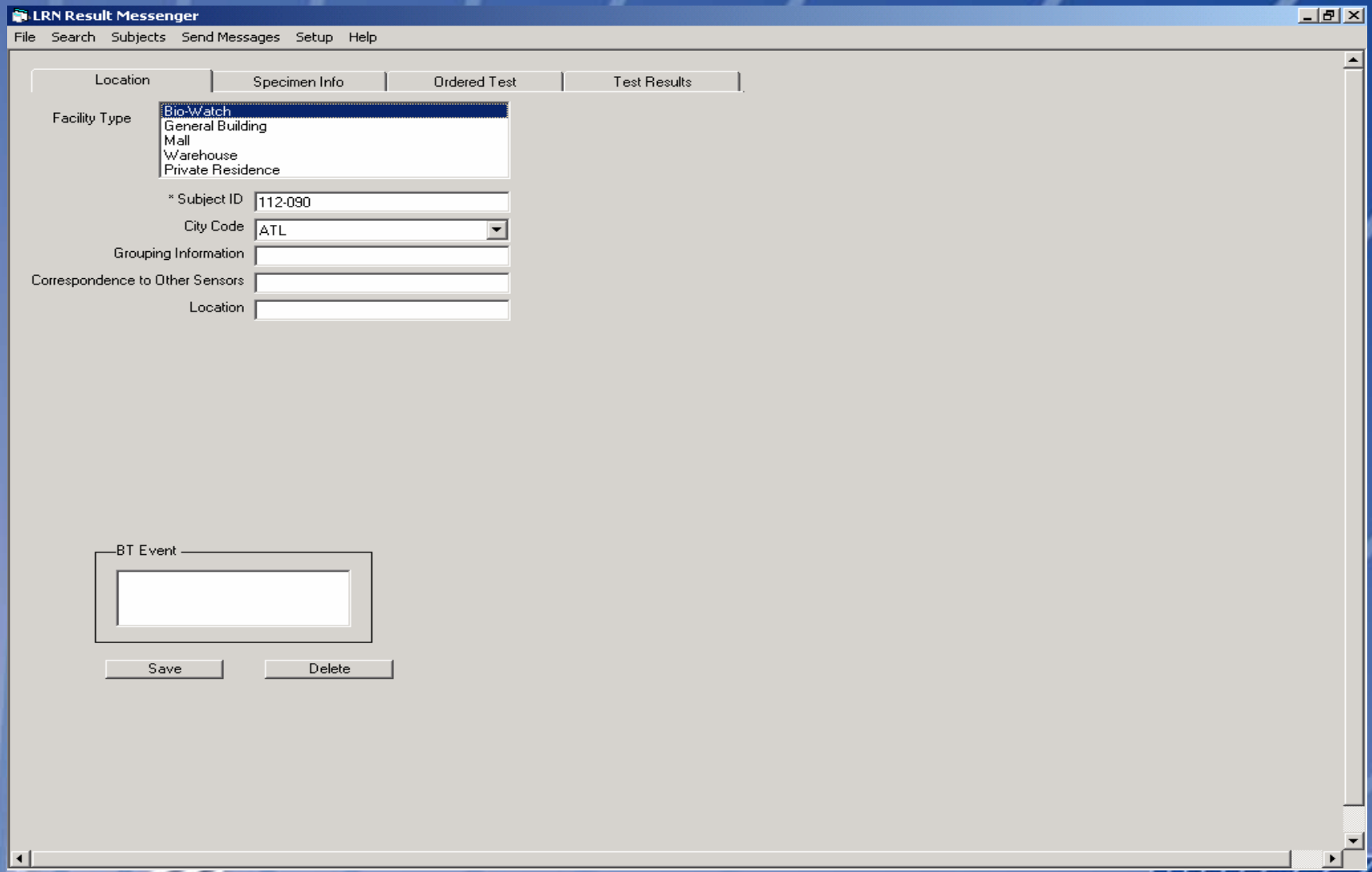
Assay/Result Information

- Biowatch Screen
  - Positive/Negative for each signature
  - Numeric result value for positives
- Verification Panel
  - Linked to positive screen result
  - Positive/Negative for each primer/probe set
  - Numeric result value for positives
- Organism growth and Isolation
  - Appropriate assay and result information as specified by LRN for specific agents

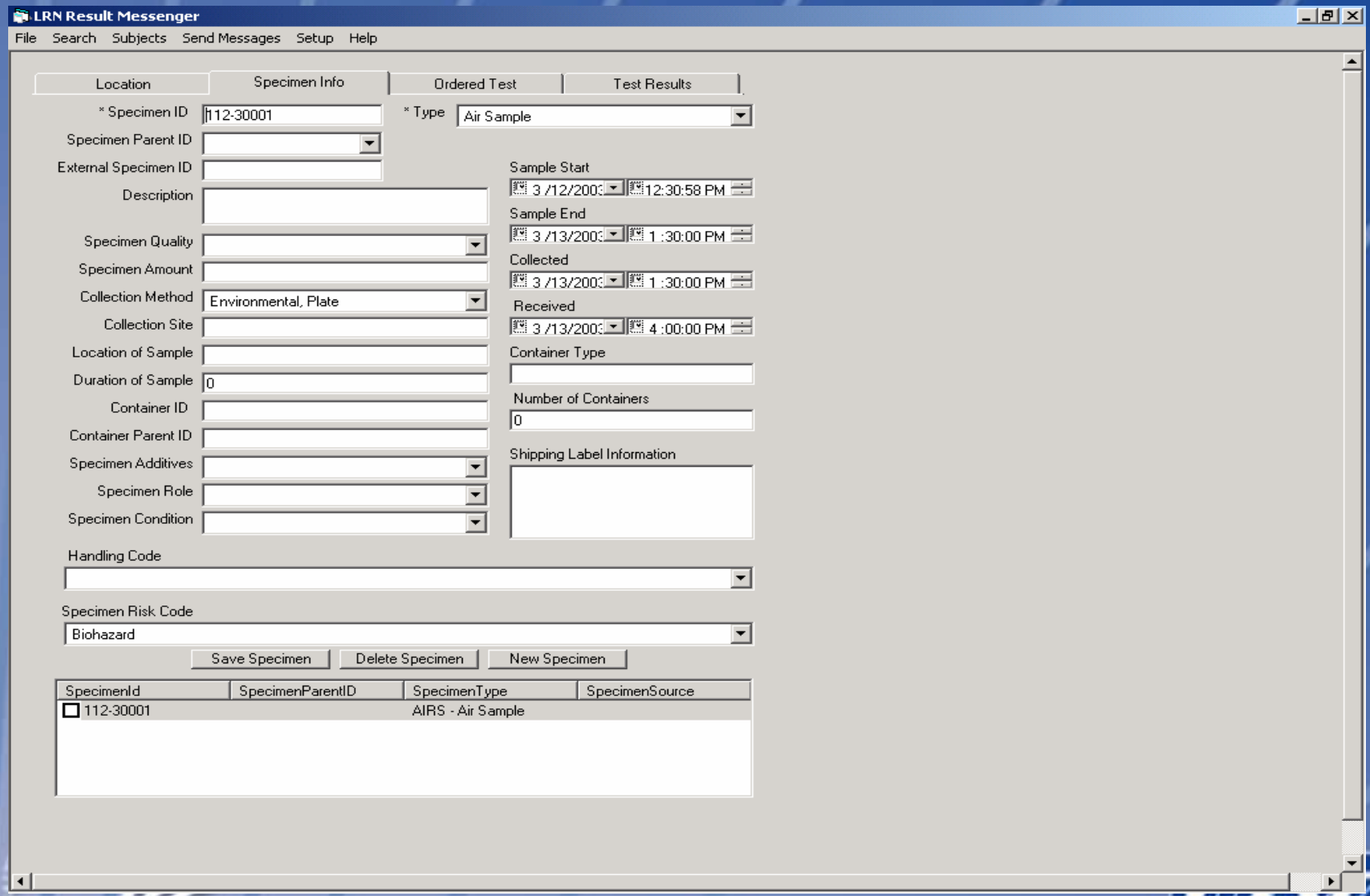
Deployment Update

- First deployment April 15
- 18 labs deployed by May 16
- Currently 4 labs sending production results

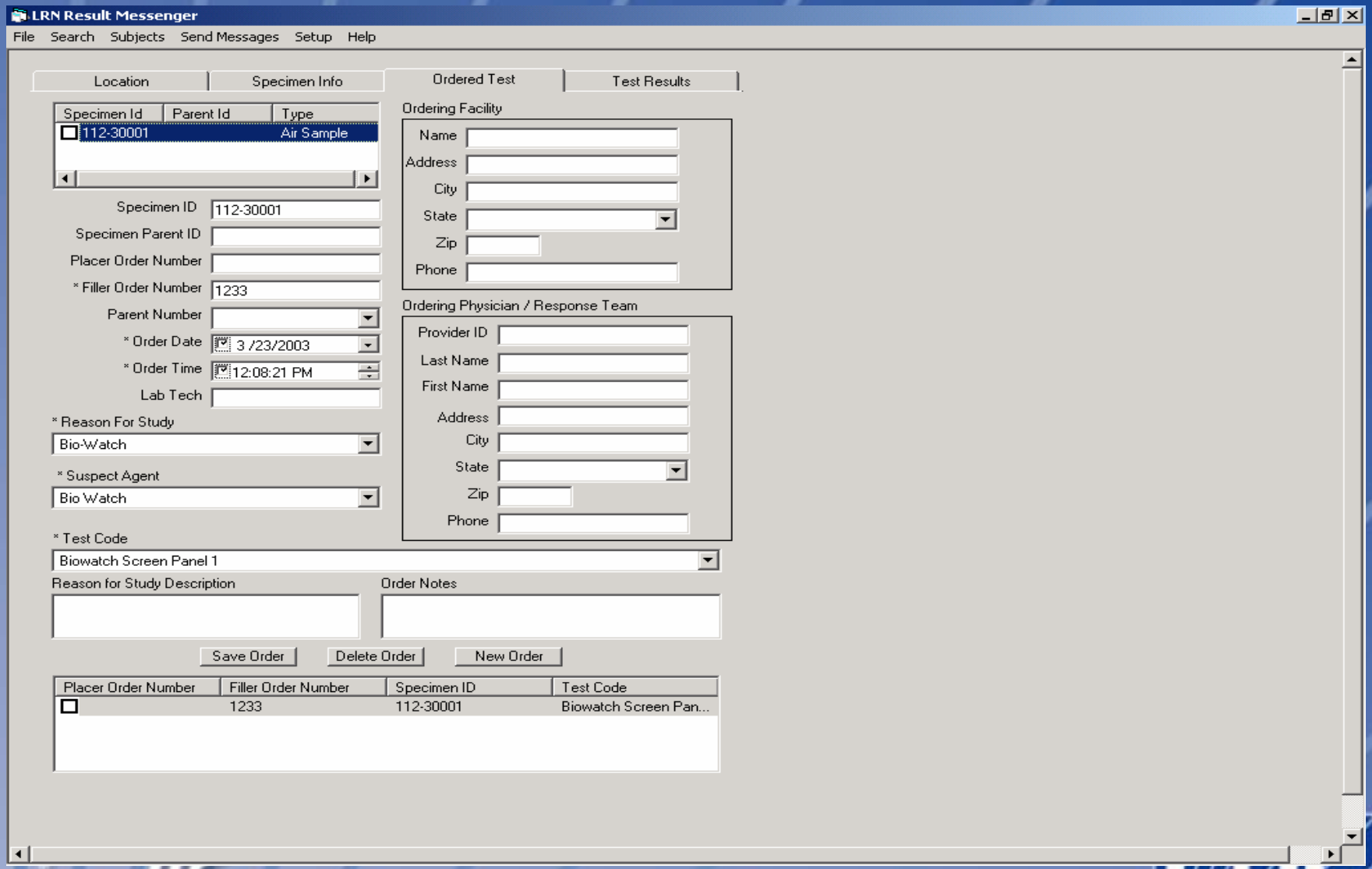
Subject Entry Screen



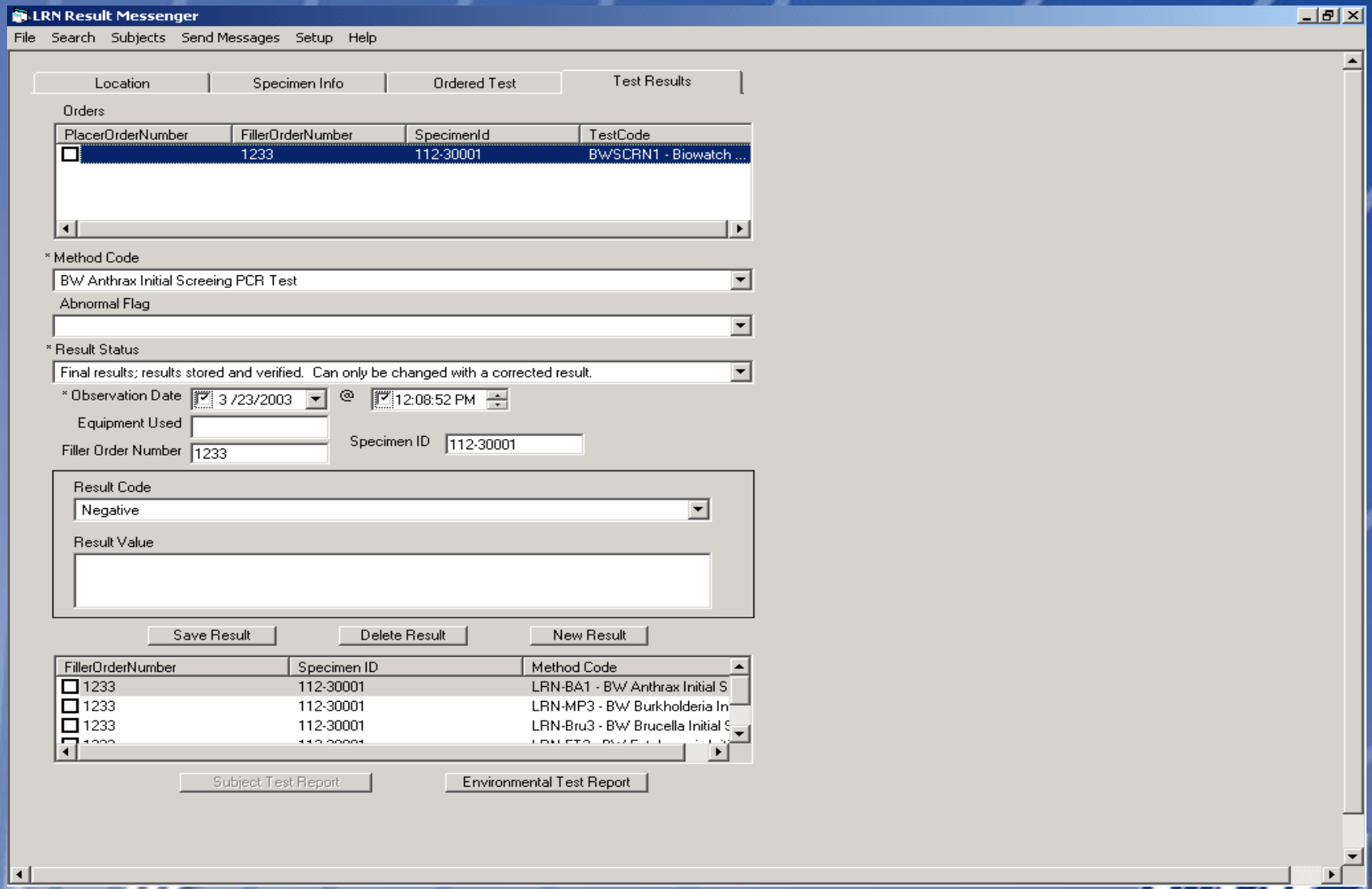
Sample/Specimen Entry Screen



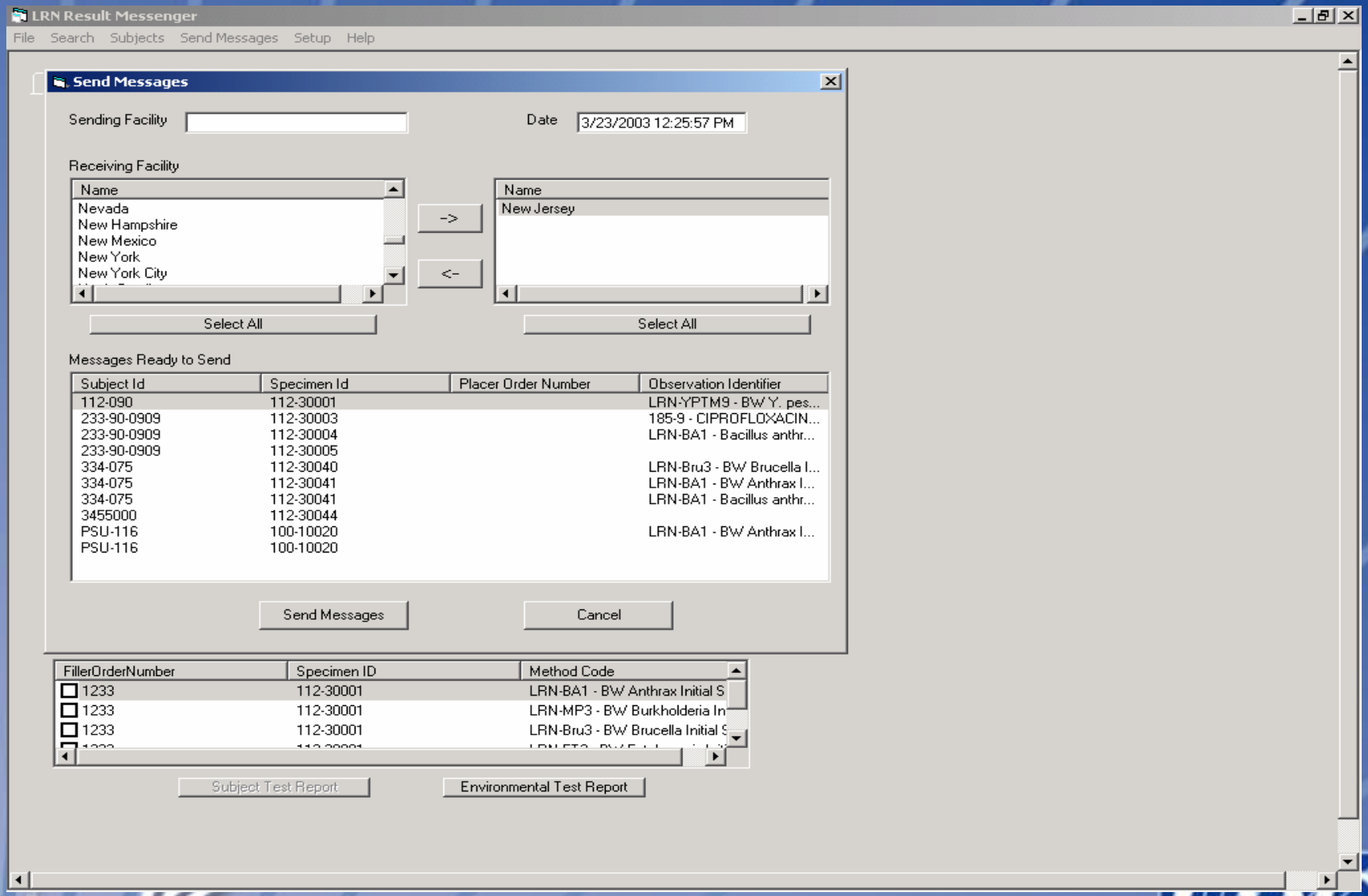
Ordered Test Entry Screen



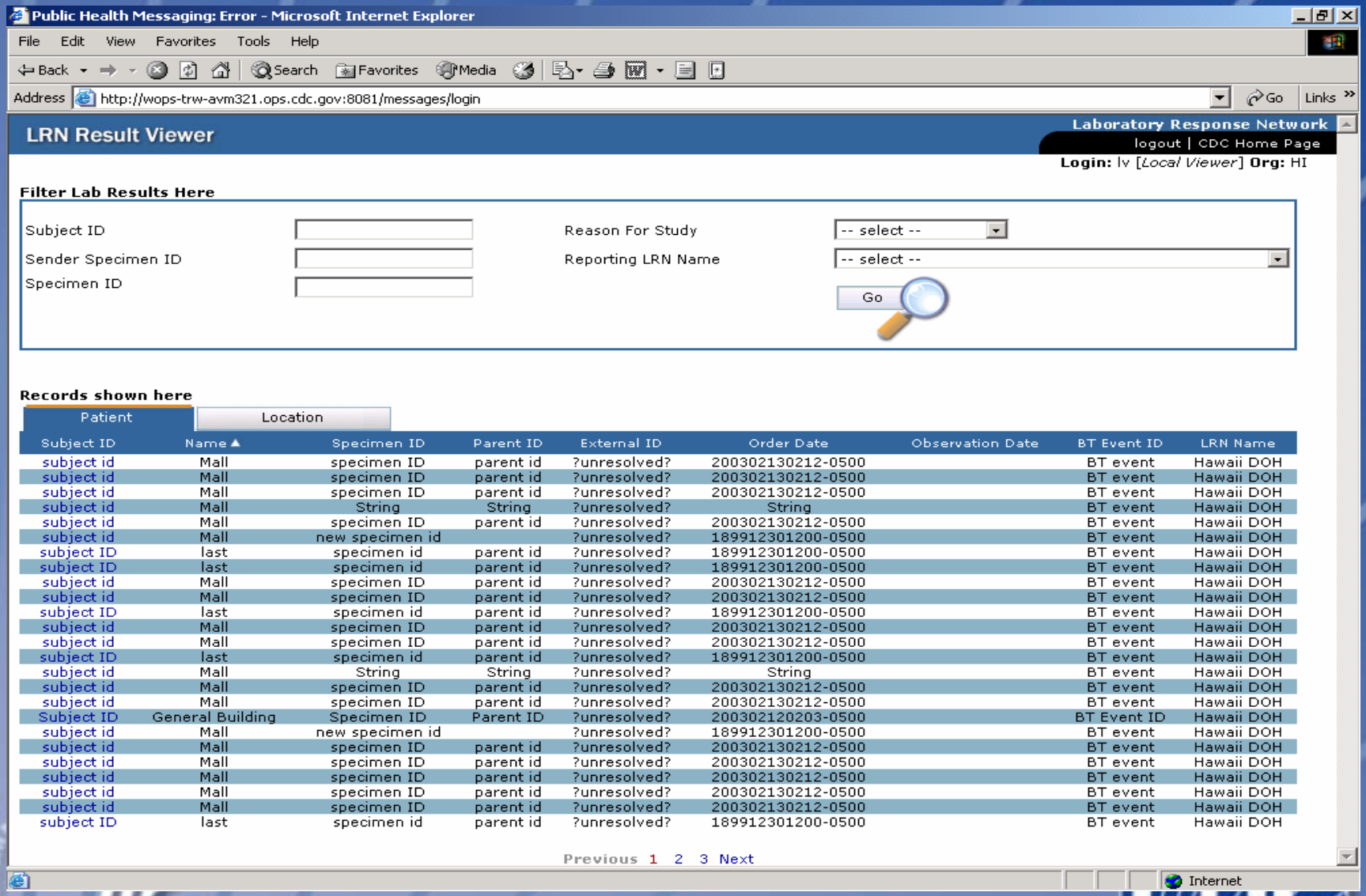
Results Entry Screen



Message Send Screen



Web Viewer Screen



Questions?

SAFER • HEALTHIER • PEOPLE™

CDC™